

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005  
& ANSI/NCSL Z540-1-1994

ALPHAGAGE  
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CALIBRATION

Valid To: August 31, 2010

Certificate Number: 1925.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations<sup>1</sup>:

I. Dimensional

Parameter/Equipment	Range	Best Uncertainty <sup>2, 4</sup> ( $\pm$ )		Comments
		Laboratory	Field <sup>3</sup>	
Micrometers –				
Hole	Up to 4 in	130 $\mu$ m	190 $\mu$ m	Ring masters
Outside	Up to 12 in	(130 + 6L) $\mu$ m	(69 + 23L) $\mu$ m	Grade 3 gage blocks
Calipers –				Grade 3 gage blocks
Analog/Vernier	Up to 12 in	0.6R	0.7R	
Digital	Up to 12 in	0.6R	0.9R	
Indicators –				Federal products digital indicator calibrator
Test Indicators	Up to 0.100 in	26 $\mu$ m	33 $\mu$ m	
Dial Indicators	Up to 4 in	78 $\mu$ m	140 $\mu$ m	
Cylindrical Plain Ring Gages	(0.25 to 7.8) in	(17 + 1.5L) $\mu$ m	Field calibration not available for this parameter.	SIP 302M UMM

Parameter/Equipment	Range	Best Uncertainty <sup>2, 4</sup> ( $\pm$ )		Comments
		Laboratory	Field <sup>3</sup>	
Pin Gages and Cylindrical Plain Plug Gages	(0 to 2) in Up to 10 in	$(60 + 3.7D) \mu\text{in}$ $(16 + 1.4L) \mu\text{in}$	Field calibration not available for this parameter.	Heidenhain digital indicator SIP 302M UMM
Tapered Threaded Plug Gages – Pitch Diameter Major Diameter Lead Half Angle	Up to 3 in Up to 3 in Up to 3 in 0° to 30°	120 $\mu\text{in}$ 60 $\mu\text{in}$ 190 $\mu\text{in}$ 10'	Field calibration not available for this parameter.	Tapered sine block, three wire method P & W Super-mic w/ tapered sine block Optical comparator Optical comparator
Straight Threaded Plug Gages – Pitch Diameter Major Diameter Lead Half Angle	Up to 4 in Up to 4 in Up to 4 in 0° to 30°	91 $\mu\text{in}$ 24 $\mu\text{in}$ 190 $\mu\text{in}$ 10'	Field calibration not available for this parameter.	Three wire method P & W Super-mic Optical comparator Optical comparator
Thread Measuring Wires	(4 to 80) TPI	17 $\mu\text{in}$	Field calibration not available for this parameter.	SIP 302M over master cylinders
Fastener Length	Up to 6 in	620 $\mu\text{in}$	650 $\mu\text{in}$	Gage blocks
Protrusion Height Gages	Diameters up to 1.000 in	83 $\mu\text{in}$	150 $\mu\text{in}$	Master gaging balls and digital indicator
Gauging Balls	(0 to 2) in	$(36 + 1.4L) \mu\text{in}$	Field calibration not available for this parameter.	SIP 302M UMM

Parameter/Equipment	Range	Best Uncertainty <sup>2, 4</sup> ( $\pm$ )		Comments
		Laboratory	Field <sup>3</sup>	
Gage Blocks	(0.1 to 4) in	(3 + 1.9 <i>L</i> ) $\mu$ in	Field calibration not available for this parameter.	By dual contact mechanical comparison
Gear Wires – All Series	Up to 0.5 in	(18 + 1.4 <i>L</i> ) $\mu$ in	Field calibration not available for this parameter.	SIP 302M UMM
Chamfer Gages – Dial and Digital	Up to 2 in	580 $\mu$ in	590 $\mu$ in	Cylindrical master ring gages
Micrometer Length Standards	(1 to 12) in	(29 + 1.4 <i>L</i> ) $\mu$ in	Field calibration not available for this parameter.	SIP 302M UMM, gage blocks and master plugs
Thickness (Feeler) Gages	Up to 0.10 in	650 $\mu$ in	Field calibration not available for this parameter.	P&W supermicrometer and gage blocks
Depth Micrometers – Vernier	Up to 12 in	0.6 <i>R</i>	0.7 <i>R</i>	Gage blocks
Digital	Up to 12 in	260 $\mu$ in	440 $\mu$ in	

<sup>1</sup> This laboratory is available for commercial and field calibration services.

<sup>2</sup> “Best Uncertainty” is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards of nearly ideal measuring equipment. Best uncertainties represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of  $k = 2$ . The best uncertainty of a specific calibration performed by the laboratory may be greater than the best uncertainty due to the behavior of the customer’s device, to the environment and to influences from the circumstances of the specific calibration.

- <sup>3</sup> Field calibration service is available for this calibration and this laboratory meets A2LA *R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations. Please note the uncertainties achievable on a customer's site can normally be expected to be larger than the Best Measurement Capabilities (BMC) that the accredited laboratory has been assigned as Best Uncertainty on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the calibration uncertainty being larger than the BMC.
- <sup>4</sup> In the statement of best uncertainty,  $L$  is the numerical value of the nominal length of the device measured in inches;  $R$  is the numerical value of the resolution of the device in microinches;  $D$  is the numerical value of the nominal diameter of the device measured in inches.



THE AMERICAN ASSOCIATION FOR  
LABORATORY ACCREDITATION

## ACCREDITED LABORATORY

A2LA has accredited

**ALPHAGAGE**  
**Rockford, IL**

for technical competence in the field of

### Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and any additional program requirements in the field of calibration. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 18 June 2005*).



Presented this 31<sup>st</sup> day of July 2008.

A handwritten signature in cursive script, reading "Peter Abney".

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President  
For the Accreditation Council  
Certificate Number 1925.01  
Valid to August 31, 2010  
Revised: July 29, 2010

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.